BIBLIOGRAPHY

OF

INDIAN GEOLOGY, PART II

INDEX OF LOCALITIES

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A correction of—3' 36" should therefore be applied to the co-ordinates of longitude inserted in the "Notes on Economic Minerals," in order that they may correspond with those shown on the degree sheets.

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BIBLIOGRAPHY

OF

INDIAN GEOLOGY, PART III

INDEX OF SUBJECTS

Complied by T. H. D. LaTouche, M.A., F.G.S. Fellow of the Asiatic Society of Bengal.

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CALCUTTA: SOLD AT THE OFFICE OF THE GEOLOGICAL SURVEY OF INDIA, 27. CHOWRINGHEE ROAD.

INTRODUCTORY NOTE.

THE figures in this Index enclosed in brackets refer to the "Bibliography of Indian Geology and Physical Geography" published in Calcutta in 1917. The first, in heavy type, is the serial number of the Author concerned; then follows the number of his contribution, if more than one; and lastly the page number, if necessary. The references to each subject are arranged in chronological order, beginning with the earliest; but when an author has made more than one contribution on a particular subject, they are included in a single bracket, though some may be of later date than those which follow.

The Economic Minerals of India, which have been dealt with in Part II, are not included in this Index; but brief reference is made to the minerals described in works on the neighbouring countries, Ceylon, the Malay Peninsula, etc., which are mentioned in the Bibliography.

The names of fossil genera and species are inserted only when they appear in the titles of papers. A complete index of the fossils described in the Geological Literature relating to India has been compiled, and, it is hoped, will shortly be ready for publication.

Natural phenomena, such as Glaciers, Lakes, Hot Springs, etc (with the exception of Mountains and Rivers, which are entered under their proper names), will be found under those headings, and not under the name of the locality or region in which they occur.

Vernacular and obsolete terms are indicated by inverted commas.

In order to make the Index as complete as possible, references are given to a number of papers that have appeared between the years 1916, the date of compilation of the Bibliography, and 1920; also to a few papers that were inadvertently omitted from that work. A list of these publications is given below, and references to them are distinguished by an asterisk (*).

SUPPLEMENTARY LIST.

A

Adamson, Sir Harvey.

9a . 1918. The Material Resources of Burma. Bull. Imp Inst., XVI, 68—79.

Annandale, N.

- 32-2. 1918. Fauna of the Inle Lake,—Introductory Account of the Lake. Rec. Ind. Museum, XIV, 1-7.
 - -3. 1919. The Gastropod Fauna of Old Lake Beds in Upper Burma. Rec. G. S. I., L, 209-240.
 - —4. 1919. Report on the Aquatic Faunas of Seistan, —— Geographical Introduction. *Rec. Ind. Museum*, XVIII, 3—16.
 - -5. 1920. Observations on "Physa Prinsepii," Sowerby, and on a Clionid Sponge that burrowed in its shell. Rec. G. S. I., LI, 50—64.

Anon.

- 35—89. 1916. Recent work on Monazite and the Thorium Minerals in Ceylon. Bull. Imp. Inst., XIV, 321—369.
 - -90. 1918. Tin in Burma. Min. Journ., CXXIII, 683-684.

Arjan Singh, see Barnes, J. H.

\mathbf{B}

Balaji Rao, B.

- 68—7. 1915. Report on Washings for Gold in the bed of the Tungabhadra River near Nagasamudra, Shimoga District. Rec. Mysore Geol. Dep., XIV, 163—169.
 - -8. 1915. Report on prospecting for Gold near Tadasa and Agardhalli in the Shimoga District. Rec. Mysore Geol. Dep., XIV, 171—174.

Bancroft, Miss N.

73a . 1913. On some Indian Jurassic Gymnosperms. Trans. Linn. Soc., Ser. 2, Botany, VIII, 69—86.

Barkat Ali, see Barnes, J. H.

Barnes, J. H., and Arjan Singh.

77a . 1917. Chalybeate Waters from Tube Wells in the Punjab. Journ. A. S. B., N. S., XIII, Proc., clxxvii (Abst.).

Barnes, J. H., and Barkat Ali.

77b . 1917. Alkali Soils: some Biochemical Factors in their Reclamation. Agric. Journ. India, XII, 368—389.

Bather, F. A.

85a . 1918. Notes on Yünnan Cystidea. Geol. Mag., Dec. 6, V, 507—515, 532—540; VI, 71—77, 110—115, 143, 255—262, 318—325.

Beer, E. J.

96a-1. 1919. Note on a Spiral Impression on Lower Vindhyan Limestone. Rec. G. S. I., L, 139.

-2. 1919. Notes on Rocks from Pavagarh to Dohad. Trans. Min. Geol. Inst. India, XIII, 73—127.

Belaiew, N.

98a . 1918. Damascene Steel. Journ. I. S. Inst., XCVII, 417—439.

Bonnet, P.

168a . 1919. Sur les relations entre les couches à Otoceras de l'Arménie (Transcaucasie méridionale) et celles de l'Himalaya. C. R. Ac. Sci., CLXIX, 288—291.

Broom, R.

203a . 1915. On the Triassic Stegocephalians, Brachyops, Bothriceps and Lydekkeriana, gen. nov. Proc. Zool. Soc., 1915, 363—368.

Brown, J.

210—2. 1920. Quarrying a thick Coal Seam in India, with Notes on Haulage and Drainage. Trans. Min. Geol. Inst. India, XIV, 97—107.

Brown, J. Coggin.

- 211—17. 1916. A descriptive Catalogue of the Meteorites comprised in the Collection of the Geological Survey of India, Calcutta (on August 1, 1914). *Mem. G. S. I.*, XLIII, 149—287.
 - —18. 1916. A Note on the Iron Ore Deposits of Twinngé, Northern Shan States. Rec. G. S. I., XLVII, 137—141.
 - —19. 1916. Contributions to the Geology of the Province of Yünnan in Western China. V. —— Geology of parts of the Salween and Mekong Valleys. Rec. G. S. I., XLVII, 205—266.
 - -20. 1917. Geology and Ore Deposits of the Bawdwin Mines. Rec. G. S. I., XLVIII, 121-178.
 - --21. 1917. A preliminary Note on the Origin of Wolfram-bearing Quartz Lodes in Tavoy District, Lower Burma. *Journ.* A. S. B., N. S., XIII, *Proc.*, ceii-ceiii (Abst.).
 - -22. 1918. The Cassiterite Deposits of Tavoy. Rec. G. S. I., XLIX, 23-33.
 - -23. 1919. The Genesis of Tungsten Ores. Geol. May., Dec. 6. VI, 44-46.
 - -24. 1920. Notes on Tungsten Ore Deposits in Burma. Journ. Soc. Chem. Ind., XXXIX, Trans., 44-48.
 - —25. 1920. The Mines and Mineral Resources of Yünnan, with short Accounts of its Agricultural Products and Trade. Mem. G. S. I., XLVII, 1—201.

Brown, J. Coggin, and Heron, A. M.

211a . 1919. The distribution of Ores of Tungsten and Tin in Burma. Rec. G. S. I., L, 101—121.

Buchanan, Sir G. C.

221a . 1916. The Rangoon River-Training Works. Proc. Inst. C. Eng., CCII, 143—242.

Buckman, S. S.

227—2. 1918. The Brachiopoda of the Namyau Beds, Northern Shan States, Burma. Pal. Indica, N. S., III, No. 2, 1—254.

Burlton, C. H. B.

234—2. 1916. The Magnesite Mines of India. As. Quart. Rev., N. S., IX, 420—432.

Burn, F. N.

234a . 1917. Earthquake in Burma. [July 5, 1917.] Nature C., 265—266.

Burrard, Sir S. G.

- 239—10. 1916. The plains of Northern India and their relationship to the Himalaya Mountains. Journ. A. S. B., N. S., XII, Proc., lxxx-xeviii.
 - 11. 1918. Geological interpretations of geodetic results: a critical examination of Mr. R. D. Oldham's recent treatise on Himalayan structure. Geogr. Journ., LII, 237—248.

Burton, R. C.

243-3. 1917. On the origin of the Laterite of Seoni, Central Provinces. Rec. G. S. I., XLVIII, 204-218.

C

Campbell, J. Morrow.

- 275—2. 1917. Laterite: its Origin, Structure, and Minerals. *Mining Mag.*, XVII, 67—77, 120—128, 171—179, 220—229.
 - -3. 1919. Ore Minerals of Tavoy. Mining Mag., XX, 76-89.
 - -4. 1919. Water in Rock Magmas and Veins. Mining Mag., XXI, 343-349.

Chacko, I. C.

297—3. 1916. Optically positive Cordierite [from Travancore]. Geol. Mag., Dec. 6, III, 462—464.

Chacko, I. C.—contd.

- 297—4. 1917. Report on the Monazite Sand Deposits in Travancore. Fol., 13 pp., Trivandrum.
 - —5. 1918. The Materials available in Travancore for the manufacture of Lime-sand Bricks, Slabs, and Tiles. Fol., Trivandrum.
 - —6. 1919. Report on Quartz, Graphite, and Mica, occurring in the Mundakayam District. Ann. Report, State Geologist, Travancore, 1093 M. E., 1—6.
 - —7. 1919. A Note on the Limestone Formations of Travancore. Ann. Report, State Geologist, Travancore, 1093 M. E., 7—10.
 - —8. 1919. The Laterites of Travancore. Ann. Report, State Geologist, Travancore, 1093 M. E., 14—23.
 - —9. 1919. A short Sketch of the Geology of Travancore and its Mineral Resources. *Journ. A: S. B.*, N. S., XV, *Proc.*, exevii—exeviii (Abst.).

----, see Krishna Iyer, K. R.

Chinmayanandan, T. K.

310a . 1919. On Haidinger's Rings in Mica [from Burma]. *Proc. Roy. Soc.*, XCV—A, 176—189.

Coales, 0.

329a . 1919. Eastern Tibet. Geogr. Journ., LIII, 228-253.

Cockerell, T. D. A.

- 331a—1. 1916. Insects in Burmese Amber. Amer. Journ Sci., Ser. 4, XLII, 135—138.
 - -2. 1917. Arthropods in Burmese Amber. Amer. Journ. Sci. Ser. 4, XLIV, 360-368.
 - -3. 1917. Arthropods in Burmese Amber. Psyche, XXIV, 40-45.
 - -4. 1917. Fossil Insects. Ann. Entom. Soc. Amer., X, 1-22.

Cockerell, T. D. A.—contd.

- 3314-5. 1917. Insects in Burmese Amber. Ann. Entom. Soc. Amer. X, 323-329.
 - -6. 1919. Two interesting Insects in Burmese Amber. Entomologist, LII, 193—195.
 - -7. 1919. Insects in Burmese Amber. Entomologist, LII, 241-243.
 - —8. 1920. Fossil Arthropods in the British Museum. Ann. Mag. Nat. Hist., Ser. 9, V, 273—279, 455—463; VI, 65—72, 211—214.
 - -9. 1920. A Therevid Fly in Burmese Amber. Entomologist, LIII, 169-170.

Cornish, Vaughan.

363a . 1897. On the Formation of Sand-dunes. *Geogr. Journ.*, IX, 278—309.

Cotter, G. de P.

- 372—12. 1917. A revised Classification of the Gondwana System. Rec. G. S. I., XLVIII, 23—33.
 - -13. 1918. The Geotectonics of the Tertiary Irrawaddy Basin. Journ. A. S. B., N. S., XIV, 409-420.
 - —14. 1919. Report on the Sanni Sulphur Mines. Rec. G. S. I., L, 130—138.

_____, see Pilgrim, Guy E.

Crookes, Sir W.

391a . 1917. On the Photographic Spectra of Meteorites. *Phil.*Trans., CCXVII—A, 411—430; Chem. News., CXIX, 45—47, 53—55, 61—62.

\mathbf{D}

Das Gupta, Hem Chandra.

423-7. 1913. On Two-shouldered Stone Implements from Assam. Journ. A. S. B., N. S., IX, 291-293.

Das Gupta, Hem Chandra—contd.

- 423—8. 1915. Palæontological Notes from Hazara. *Journ. A. S. B.*, N. S., XI, 253—257.
 - —9. 1917. On the occurrence of Limburgite in British Baluchistan. Journ. A. S. B., N. S., XIII, 293—298.
 - —10. 1917. On the Zonal Distribution of Placenticeras tamulicum Kossmat. Proc. Indian Assoc. Sci., II, 36—40.
 - —11. 1917. Notes on some Fish Teeth from the Tertiary beds of Western India. Proc. Indian Assoc. Sci., III, 158—160.
 - —12. 1918. On a peculiar polished Hammerstone, from Singhbhum, Chota Nagpur, India. *Ind. Antiquary*, XLVII, 135—136.
 - -13. 1919. Notes on the Panchet Reptile. Journ. A. S. B., N. S., XV, Proc., excix (Abst.).
 - —14. 1919. Note on a Mammalian Fossil from Bhavnagar (Kathiawar). Journ. A. S. B., XV, Proc., excix (Abst.).
- ____, see Vredenburg, E. W.
- Datta, S. C.
 - 424a . 1917. On the alteration of Pyrite occurring in Steatite.

 Proc. Indian Assoc. Sci., II, 18—25.
- Davis, A. Morley.
 - 431a . 1918. The Problem of the Himalaya and the Gangotic Trough. Geogr. Journ., LI, 175—183.
- Deprat, J.
 - 468—7. 1916. Sur la découverte d'horizons fossilifères nombreux et sur la succession des faunes dans le Cambrien moyen et le Cambrien supérieur du Yünnan meridional. C. R. Ac. Sci., CLXIII, 761—763.
 - -8. 1917. Sur la présence du Cambrien inférieur à l'ouest de Yünnan Fou. C. R. Ac. Sci., CLXV, 564.

Dickinson, A.

484a . 1918. Water Power in India. Journ. Soc. Arts, LXVI, 417—426.

Douvillé, H.

- 499—3. 1916. La Crétacé et l'Éocène du Tibet central. Pal. Indica, N. S., V, Pt. 3, 1—52.
 - -4. 1920. La limite entre la Crétacé et l'Éocène, en Aquitaine, aux Indes, et au Soudan. C. R. Ac. Sci., CLXX, 154-159.

F

Fermor, L. L.

- 577—52. 1917. On the Crystallography and Nomenclature of Hollandite. Rec. G. S. I., XLVIII, 103—120.
 - -53. 1918. Preliminary Note on the Burning of Coal Seams at the Outcrop. Trans. Min. Geol. Inst. Ind., XII, 50-63.
 - -54. 1919. The Mineral Resources of the Central Provinces. Rec. G. S. I., L, 268-302.
 - -55. 1919. Some Problems of Ore Genesis in the Archeans of India. Journ. A. S. B., N. S., XV, Proc., clxx-exev.
 - -56. 1919 Note on "Lavas" formed by the burning of Coalseams. Journ. A. S. B., N. S., XV, Proc., exeviii.

Fermor, L. L., and Fox, C. S.

577a . 1916. The Deccan Trap Flows of Linga, Chhindwara District, Central Provinces. Rec. G. S. I., XLVII, 81—136.

Fourtau, R.

611a . 1918. Les Echinides des "Bagh Beds." Rec. G. S. I., XLIX, 34-53.

Fox, C. S. see Fermor, L. L.

G

George, Glen.

646—4. 1917. The development of Deep Coal Areas in Bengal. Trans. Min. Geol. Inst. India, XI, 77—137. Ghose, A.

652-4. 1919. Sedimentary Origin of the Dharwars. Trans. Min. Geol. Inst. India, XIV, 55-59.

Glungler, G.

666a . 1916. Die Gebirgsgruppe Bogdo-Ola im östlichen Tian-Schan,—Petrographischer Teil. Abhandl. k-bayer. Akad. Wiss., XXVII, 5 Abh., 267—292.

Gortani, M.

682a . 1920. Permocarbonifero e permiano nella catena del Caracorum. Atti R. Acc. Lincei, Rendic., Ser 5, XXIX, Pt. 2, 53—55.

Gregory, J. W.

704—6. 1919. A low-level Glaciated Surface in the Eastern Himalaya. Geol. Mag., Dec. 6, VI, 397—406.

Griffiths, H. D.

709a—1. 1914. The Wolframite Industry of Lower Burma. Mining Mag., X, 440—451.

- -2. 1917. The Wolfram Deposits of Burma. Mining Mag., XVII, 60-66.
- -3. 1917. The Kanbauk Wolfram Mine. Mining Mag., XVII, 211-219.

Gröber, P.

715—2. 1916. Die Gebirgsgruppe Bogdo-Ola im östlichen Tian-Schan.—Geologischer Teil. Abhandl. k-bayer. Akad. Wiss., XXVII, 5 Abh., 247—266.

Hallowes, K. A. K.

- 741a—1. 1917. An account of the sub-division of the Deccan Trap Series in the neighbourhood of Narayanganj, Mandla District, Central Provinces. *Journ. A. S. B.*, N. S. XIII, *Proc.*, ceiii (Abst.).
 - —2. 1919. On some Infra-Trappeans and a Silicified Lava from Hyderabad, South India. Rec. G. S. I., XLIX, 220—222.

Hallowes, K. A. K.—contd.

- 741a-3. 1919. On the discovery of basic and ultra-basic members of the Charnockite Series in the Central Provinces. Journ. A. S. B., N. S., XV, Proc., exevii (Abst.).
 - —4. 1920. On the Coal Seams of the Foot-hills of the Arakan Yoma, between Letpan Yaw in Pakokku and Ngape in Minbu, Upper Burma. Rec. G. S. I., LI, 34—49.

H

Hayden, Sir H. H.

- 793—35. 1916. General Report of the Geological Survey of India for the year 1915. Rec. G. S. I., XLVII, 1—41.
 - —36. 1916. The Mineral Production of India during 1915. Rec. G. S. I., XLVII, 144—195.
 - -37. 1917. General Report of the Geological Survey of India for the year 1916. Rec. G. S. I., XLVIII, 1-22.
 - —38. 1917. The Mineral Production of India during 1916. Rec. G. S. I., XLVIII, 35—97.
 - -39. 1918. General Report of the Geological Survey of India for the year 1917. Rec. G. S. I., XLIX, 1-22.
 - -40. 1918. The Mineral Production of India during 1917. Rec. G. S. I., XLIX, 55-116.
 - —41. 1918. The relationship between Geology and Earthquakes in India. *Journ. A. S. B.*, N. S., XIV, *Proc.*, xviii—xxiv.
 - -42. 1919. General Report of the Geological Survey of India for the year 1918. Rec. G. S. I., L, 1-27.
 - -43. 1919. The Mineral Production of India during 1918. Rec. G. S. I., L, 141-208.
 - -44. 1919. Geological Time, especially in its bearings on the Antiquity of the Human Race. Journ. A. S. B., N. S., XV, Proc., xiv—xxi.

Hayden, Sir H. H.—contd.

- 793—45. 1920. General Report of the Geological Survey of India for the year 1919. Rec. G. S. I., LI, 1—27.
 - -46. 1921. The Mineral production of India during 1919. Rec. G. S. I., LI, 159-223.
- Hayden, Sir H. H., and Pascoe, E. H.
 - 794a 1919. Note on the geological aspect of the changes that have taken place in the rivers of Bengal. Report on the Hooghly River and its Head-Waters. Part I, 17—22.

Heron, A. M.

- 830—4. 1917. Monazite in Mergui and Tavoy. Rec. G. S. I., XLVIII, 179—180.
 - -5. 1917. The Biana-Lalsot hills in Eastern Rajputana. Rec. G. S. I., XLVIII, 181—203.
 - -6. 1917. The Geology of North-Eastern Rajputana and adjacent Districts. Mem. G. S. I., XLV, 1-128.
- -----. see Brown, J. Coggin.
- Hoffmann, J. D.

854a . 1916. The Bawdwin Mines. Mining Mag., XIV, 139-146.

Holden, Miss R.

- 855a-1. 1915. On the Cuticles of some Indian Conifers. Botanical Gazette, LX, 215-227.
 - -2. 1916. A Fossil Wood from Burma. Rec. G. S. I., XLVII, 267-272.
 - -3. 1917. On the Anatomy of two Paleozoic Stems from India.

 Annals of Botany, XXXI, 315-326.
- Hutoon, C. H.
 - 899a . 1918. Rainfall, Irrigation, and the Subsoil Water-Level of the Gangetic Plain in the United Provinces of Agra and Oudh. Agric. Journ. India, XIII, 197—205, 460—470.

J

Jack, H. S. Maclean.

917a . 1917. The Development of the Petroleum Industry in Assam. Journ. Soc. Arts, LXV, 589-596.

Jayaram, B.

- 937—8. 1915. Notes on a revision of the Survey in parts of Kadur, Shimoga, and Channagiri Taluks. Rec. Mysore Geol. Dep., XIV, 61—107.
 - -9. 1918. Annual Report of the Department of Mines and Geology, Mysore State, for the year 1916-17. Rec. Mysore Geol. Dep., XVI, 1-50.
 - —10. 1919. Annual Report of the Department of Mines and Geology, Mysore State, for the year 1917-18. Rec. Mysore Geol. Dep., XVII, 1—25.
 - —11. 1919. Notes on the revision of the Survey in parts of the Shimoga, Honnali, Shikarpur, Sagar, Nagar and Tirthahalli Taluks. Rec. Mysore Geol. Dep., XVI, 67—109.

Jones, H. Cecil.

- 953—2. 1920. Note on Monazite in the Southern Shan States. Rec, G. S. I., LI, 156.
 - 3. 1920. Note on an occurrence of Graptolites in the Southern Shan States. Rec. G. S. I., LI, 156.

Jones, W. R.

- 957—4. 1915. The Origin of the Secondary Stanniferous Deposits of the Kinta District, Perak, Federated Malay States. Quart. Journ. Geol. Soc., LXXII, 165—197 (Abst., Geol. Maq., Dec. 6, II, 381—382).
 - —5. 1916. The Origin of Topaz and Cassiterite at Gunong Bakau, Malaya. Geol. Mag., Dec. 6, III, 255—260.
 - —6. 1916. Preliminary Report on Tin mining on the Main Range at Ulu Bakau and neighbourhood. *Geol. Mag.*, Dec. 6, III, 453—456.

Joti Parshad Lala, see Middlemiss, C. S.

\mathbf{K}

Keilhack, K.

968a. 1915. Granatsand-Dünen auf Ceylon. Zeits. deutsch. Geol. Ges., LXVII, 47—56.

Kellas, A. M.

971—2. 1917. A consideration of the possibility of ascending the loftier Himalayas. Geogr. Journ., XLIX, 26—48.

Koken, E.

1006—1a. 1885. Uber fossile Säugthiere aus China. Geol. u. Pal. Abhandl., III, 31—114.

Krishna Iyer, K. R., and Chacko, I. C.

1013a 1919. A peculiar limestone from South Travancore. Journ. A. S. B., N. S., XV, Proc., exeviii (Abst.).

L

La Touche, T. H. D.

- 1034—46. 1917. A Bibliography of Indian Geology and Physical Geography; with an Annotated Index of Minerals of Economic Value. 8°, 2 Parts, Calcutta.
 - -47. 1919. The Submerged Forest at Bombay. Rec. G. S. I., XLIX, 214 -219.

Leriche, M., and Reis, M.

1061a. 1916. Über fossile Fische aus der Bogdo-Ols [E.Tian-Schan].

Abhandl. k-bayer. Akad. Wiss., XXVII, 5 Abh., 306—308.

Leuchs, K.

1066—2. 1919. Marines Ober-Karbon im zentralen Tianschan. Sitz. k-bayer. Akad. Wiss., 1919, 217—228.

Loveman, M. H.

- 1094a—1. 1917. The Geology of the Bawdwin Mines, Burma, Asia. Trans. Amer. Inst. Min. Eng., LVI, 170—194.
 - 2. 1919. A connecting link between the Geology of the Northern Shan States and Yünnan. *Journ. Geol.*, XXVII, 204—211.

M

McClelland, J.

1117—37. 1859. Sketch of the Medical Topography, or Climate and Soils of Bengal and the N. W. Provinces. 8°, 148 pp. London.

McWilliam, A.

1150a. 1918. Technical aspects of the Establishment of the Heavy Steel Industry in India, with results of some researches connected therewith. *Journ. I. S. Inst.*, XCVII, 451—468.

Mann, H. H., and Paranjpé, S. R.

1165—2. 1916. The Hot Springs of the Ratnagiri District. Journ. Bo. As. Soc., XXIV, 185—212.

Mansuy, H.

1167—4. 1919. Paludinidæ fossiles du Bassin Lacustre de Mung-Tsen, Yunnan. Bull. Serv. Géol. de l'Indo-Chine, V, Fasc. III. 1—7.

—5. 1919. Catalogue Général par terrains et par localités, des fossiles recueillis en Indo-Chine et en Yunnan, par Géologues du Service Géologique et par les Officers du Service Géographique de l'Indo-Chine au cours des années 1903—1918. Bull. Serv. Géol. de l'Indo-Chine. VI, Fasc. VI, 1—226.

Matley, C. A.

1190a—1. 1918. Note on some Dinosaurian remains recently discovered in the Lameta beds at Jubbulpore. Journ. A. S. B., N. S., XIV, Proc., clxxxvi (Abst.).

—2. 1919. On the remains of Carnivorous Dinosaurs from the Lameta beds at Jubbulpore. *Journ. A. S. B.*, N. S., XV, *Proc.*, excviii (Abst.).

Maung Po San, see Warth, F. J.

Maxwell—Lefroy, E.

1192a . 1916. Wolframite Mining in the Tavoy District, Lower Burma. Trans. Inst. Min. Met. XXV, 83—119.

Meade, C. F.

1195a . 1920. The Schlagintweits and Ibi Gamin (Kamet). Alp. Journ., XXXIII, 70—75.

Merzbacher, G.

- 1211—2. 1904. Forschungsreise in der Zentralen Tian-Schan. Peterm.

 Mitth., Ergbd., XXXII, No. 149, 1—100. Transl., 8°,
 285 pp., London, 1905.
 - —3. 1916. Die Gebirgsgruppe Bogdo-Ola im östlochen Tian-Schan. Abhandl. k-bayer. Akad. Wiss., XXVII, 5 Abh., 1—246.

Middlemiss, C. S.

- 1219—32. 1917. Complexities of Archæan Geology in India. Journ. A. S. B., N. S., XIII, Proc., exev—ceii.
 - --33. 1919. Possible occurrence of Petroleum in Jammu Province: Preliminary Note on the Nár-Budhán Dome, of Kotli Tehsil in the Punch Valley. Rec. G. S. I., XLIX, 191—213.
 - —34. 1919. On the inclination of the Thrust-Plane, or Reversed Fault, between the Siwalik and Murree Zone of formations, near Kotli, Jammu Province. Rec. G. S. I., L, 122—125.

Middlemiss, C. S., and Joti Parshad Lala.

1219a 1918. Note on the Aquamarine Mines of Daso on the Braldu River, Shigar Valley, Baltistan. Rec. G S I., XLIX, 161—172.

Middleton, W. B.

1222a 1915. Prospecting Tin Land in Malaya. Trans. Inst. Min. Met., XXIV, 300—328.

Minchinton, H. D.

1231—3. 1917. Himalayan Scrambles in 1914. Alp. Journ., XXXI, 51—70.

Molony, E.

1238—2. 1917. Rainfall, Irrigation, and Subsoil Water Reservoirs of the Gangetic Plain in the United Provinces of Agra and Oudh. Agric. Journ. India, XII, 84—89.

Moore, E. S.

1246a 1918. Air Blasts in the Kolar Gold Field, India. Bull.

Amer Inst. Mining Engineers, CXXXV, 687—694.

N

Neogi, Panchanan.

1287—2. 1918. Copper in Ancient India. Indian Assoc. Sci., Special Bulletin, No. 1.

0

Oldham, R. D.—

- 1324-74. 1916. The Support of the Himalaya. Quart. Journ. Geol. Soc., LXXII, Proc., viii—ix.
 - -75. 1917. The Structure of the Himalaya and of the Gangetic Plain, as elucidated by Geodetic Observations in India. Mem. G. S. I., XLII, 149-301.
 - —76. 1918. The Support of the Mountains of Central Asia (being an Appendix to the Memoir on the Structure of the Himalaya and of the Gangetic Plain, as elucidated by Geodetic Observations in India). Rec. G. S. I., XLIX, 117—135.
 - -77. 1918. The Geological Application of Geodetic Results. Geogr. Journ., LII, 363-367.
 - -78. 1918. A Seasonal Variation in the Frequency of Earth-quakes. Quart. Journ. Geol. Soc., LXXIV, 99-105.
 - ---79. 1919. The Interior of the Earth. Geol. Mag., Dec. 6, VI, 18--27.

P

Paranjpé, S. R., see Mann, H. H.

Parona, C. F.

1366a . 1917. Faune cretaciche del Caracorume degli Altipiani tibetani (Spedizione Italiana nell' Asia Centrale, 1913—1914). Atti R. Acc. Lincei, Rendic., Ser. 5, XXVI, Pt. 2, 53—57..

Pascoe, E. H.

- 1369—14. 1919. The Early History of the Indus, Brahmaputra and Ganges. Quart. Journ. Geol. Soc., LXXV, 138—157.
 - -15. 1920. Sulphur near the Confluence of the Greater Zab with the Tigris, Mesopotamia. Rec. G. S. I., LI, 153-155.

, see Hayden, Sir H. H.

Pilgrim, Guy E.

- 1408—13a. 1911. The fossil Giraffidæ of India. Pal. Indica, N. S., IV, Pt. 4, 1—29.
 - —23. 1917. Preliminary Note on some recent Mammal Collections from the Basal Beds of the Siwaliks. Rec. G S. I., XLVIII, 98—101.
 - -24. 1919. Suggestions concerning the History of the Drainage of Northern India arising out of a Study of the Siwalik Boulder Conglomerates. *Journ. A. S. B.*, N. S., XV, 81—99.

Pilgrim, Guy E., and Cotter, G. de P.

1406a . 1916. Some newly discovered Eocene Mammals from Burma. Rec. G. S. I., XLVII, 42—77.

Pinfold, E. S.

- 1406d-1. 1918. Notes on Structure and Stratigraphy in the North-West Punjab. Rec. G. S. I., XLIX, 137-160.
 - —2. 1918. Conditions governing the occurrence of Oil in the Punjab. *Journ. A. S. B.*, N. S., XIV, *Proc.*, clxxiii—clxxxiv.
 - --3. 1919. Two new Fossil Localities in the Garo Hills. Rec. G. S. I., L, 126-129.

Prior, G. T.

1437—4. 1916. The Meteoric Stones of Launton.... Khairpur and Soko-Bunja. *Mineral. Mag.*, XVIII, 1—25.

\mathbf{R}

Rastall, R. H.

1459a . 1918. The Genesis of Tungsten Ores. Geol. Mag., Dec. 6, V, 193—203, 241—246, 293—296, 367—370.

Reed, F. R. Cowper.

1470—11. 1917 Ordovician and Silurian Fossils from Yünnan. Pal. Indica, N. S., VI, Pt. 3, 1—69.

- 12. 1919. The Yünnan Cystidea. Geol. Mag., Dec. 6, VI, 92-93, 191-192.

Reis, M., see Leriche, M.

S

Sahni, B., see Seward, A. C.

Sambasiva Iyer, V. S.

1548—12. 1918. On the distinct Sedimentary Origin of some Quartzites of Mysore. *Journ. A. S. B.*, N. S., XIV, *Proc.*, clxxxvi (Abst.).

Sampat Iyengar, P.

1549—12. 1915. The Schistose Rocks of the Bababudans, with special reference to the Auriferous Series in their neghbourhood. Rec. Mysore Geol. Dep., XIV, 109—134.

____, see Smeeth, W. F.

Samuelson, B. M.

1551a . 1917. The Effect of Flood Embankments on the River-Levels in the Irrawaddy Delta. Proc. Inst. C. Eng., CCIII, 362—370.

Schenk, August.

1567—2. 1882. Die von den Gebrüdern Schlagintweit in Indien gesammelten fossilen Hölzer. Engler's Bot. Jahrb., III, 353—358.

Schuster, J.

1590a 1916. Fossile Pflanzen aus dem Tian-Schan. Abhandl, k-bayer. Akad. Wiss., XXVII, 5 Abh., 299—305.

Scrivenor, J. B.

- 1603—38. 1916. Two large Obsidianites from the Raffles Museum, Singapore. Geol. Mag., Dec. 6, III, 145—146.
 - —39. 1918. The Kaolin Veins [Federated Malay States]. Geol. Mag., Dec. 6, V, 79—82.
 - —40. 1918. The Origin of the Clays and Boulder-clays, Federated Malay States. Geol. Mag., Dec. 6, V, 157—168.

Sen, A. M.

1606—5. 1915. Report on the Geology of the North-Western portion of the Shimoga District. Rec. Mysore Geol. Dep., XIV, 135—161.

Sen Gupta, Kiran K.

- 1606a—1. 1916. On the hypersthenization of Monoclinic Pyroxenes [in Charnockite]. *Journ. A. S. B.*, N. S., XII, *Proc.*, exxi—exxiii (Abst.).
 - —2. 1916. On the Correlation of Augite-diorite and Dolerite [Cochin]. Journ. A. S. B., N. S., XII, Proc., exxiii (Abst.).
 - —3. 1916. On the Chronological Sequence of some Megalithic Monuments. *Journ. A. S. B.*, N. S., XII, *Proc.*, exxiv—exxv (Abst.).

Seward, A. C., and Sahni, B.

1610a . 1920. Indian Gondwana Plants: A Revision. Pal. Indica, N. S., VII, Pt. 1, 1—41.

Silver, A. H.

1634a . 1917. The possibility of using Reh or Sujji Mitti for the manufacture of commercial Alkalis. Agric. Journ India, XII, 477—480.

Simpson, F. L. G.

1639—2. 1916. A description of the methods of working out the Pillars at the Mohpani Mines by means of packing and a comparison of the dry and wet systems of packing.

Trans. Min. Geol. Inst. India, XI, 29—48.

Simpson, R. R.

1640—11. 1917. Note on the correlation of the Kusunda-Jharia-Lodna Coal Outcrops. Trans. Min. Geol. Inst. India. XI, 269—270.

Smeeth, W. F.

- 1652—22. 1915. Annual Report of the Department of Mines and Geology, Mysore, for the year 1914. Rec. Mysore Geol. Dep., XIV, 1—59.
 - -23. 1916. Outline of the Geological History of Mysore. Bull. Mysore Geol. Dep., No. 6, 1-21.
 - --24. 1918. The Geology of Southern India, with particular reference to the Archæan Rocks of the Mysore State. Quart. Journ. Geol. Soc., LXXIV, Proc., lxxxiii-lxxxv.
 - —25. 1918. Air Blasts in the Kolar Goldfield, India. Bull. Amer. Inst. Mining Engineers, CXLII, 1542—1553.

Smeeth, W. F., and Sampat Iyengar, P.

1652a . 1916. The Mineral Resources of Mysore. Bull. Mysore Geol. Dep., No. 7, 1—193.

Smeeth, W. F., and Watson, H. E.

1652b . 1918. The Radioactivity of Archean Rocks from the Mysore State, South India. *Phil. Mag.*, Ser. 6, XXXV, 206—214.

Stefanini, G.

- 1690a—1. 1917. Echinini mesozoici del Caracorum raccolti dalla "Spedizione italiana nell' Asia Centrale (1913—1914). Atti R. Acc. Lincei, Rendic, Ser 5, XXVI, Pt. 2, 49—50.
 - —2. 1917. Sull' esistenza di depositi cenomaniani edialtri livelli mesozoici nel Caracorum (Asia Centrale). Atti R. Acc. Lincei, Rendic., Ser. 5, XXVI, Pt. 2, 190—195.

Steichen, A.

1690b . 1916. The variation of the Radioactivity of the Hot Spring at Tuwa [Bombay]. Phil. Mag., Ser. 6, XXXI, 401—403

Stoney, E. W.

- · 1714a—1. 1898. Extraordinary Floods in Southern India: their Causes and destructive Effects on Railway Works. Proc. Inst. C. Eng., CXXXIV, 66—118.
 - —2. 1917. Description of an Extraordinary Flood which occurred on the 11th November, 1903, in the Palar River; its Cause, and Destructive Effects. *Proc. Inst. C. Eng.*, CCIV, 410—416.

Stuart, Murray.

- 1723—10. 1918. Preliminary Note on the Srimangal Earthquake of July 8th, 1918. Rec. G. S. I., XLIX, 173—189.
 - —11. 1919. The Potash Salts of the Punjab Salt Range and Kohat. Rec. G. S. I., L, 28—56.
 - —12. 1919. Suggestions regarding the Origin of the Rock-Salt Deposits of the Punjab and Kohat. Rec. G. S. I., L, 57—99.
 - -13. 1919. The Galena Deposits of North-Eastern Putao. Rec. G. S. I., L, 241-254.
 - —14. 1919. Natural Gas in Bituminous Salt from Kohat. Rec. G. S. I., L, 263—267.
 - -15. 1920. The Srimangal Earthquake of 8th July, 1918. Mem. G. S. I., XLVI, 1-70.
 - -16. 1920. The growth of an efflorescence of Cerium sulphate on Travancore Graphite. Rec. G. S. I. LI, 156-158.

Subha Rao, L.

1723a . 1917. Corundum and its occurrence in Mysore. Journ. A. S. B., N. S., XIII, Proc., coiv (Abst.).

T

Tipper, G. H.

1787—13. 1919. On Pitchblende, Monazite, and other Minerals from Pichhli, Gaya District, Bihar and Orissa. Rec. G. S. I., L, 255—262.

Tipper, G. H.—contd.

1787—14. 1919. Note on Sipylite from the Nellore District, Madras Presidency. Rec. G. S. I., L, 303.

- -15. 1920. Note on Pseudo-crystals of Graphite from Travancore. Rec. G. S. I., LI, 28-30.
- —16. 1920. On a Mineral related to Xenotime from the Manbhum District, Bihar and Orissa Province. Rec. G. S. I. LI, 31—33.

Tuckwell, H. M. Surtees.

1810a . 1918. The Tata Iron and Steel Works: their Origin and Development. Journ. Soc. Arts, LXVI, 190—204.

Turner, H. W.

1815a . 1919. Review of the recent Literature on the Tungsten Deposits of Burma. Econ. Geol., XIV, 625—639.

V

Van Bemmelen, J. M.

1829a 1904. Beiträge zur Kenntnis der Verwitterungsprodukte der Silikate in Ton-, Vulkanischen und Laterite-Boden. Zeits. f. anorg. Chem., XLII, 265—314.

Varadaiya, M.

1832a 1916. The Exploitation of Minerals in Mysore. Bull. Mysore Geol. Dep., No. 8, 1—20, i—lvi.

Venkataramaiya, B. N.

1838—5. 1915. Notes on prospecting work [in the Mysore District].

Rec. Mysore Geol. Dep., XIV, 175—188.

-6. 1919. Prospecting for Iron Ore in the Kemmangundia area. Rec. Mysore Geol. Dep., XVI, 110-121.

Vredenburg, E. W.

1854—44. 1916. Flemingostrea, an eastern group of Upper Cretaceous and Eocene Ostreidæ: with descriptions of two new species. Rec. G. S. I., XLVII, 196—203.

Vredenburg, E. W.—contd.

- 1854-45. 1917. Notes on the Origin of the Living Molluscan Fauna of the Indian Ocean, with reference to Former Geological Times. Journ. A. S. B., N. S., XIII, Proc., cciii (Abst.).
 - -46. 1918. Considerations regarding a possible relationship between the Charnockites and Dharwars. Journ. A. S. B., N. S., XIV, 433-448.
 - -47. 1918. Note on the occurrence of Dolium variegatum Lamarck at Muskat, with considerations on its geographical distribution at the present day and in former geological times. Journ. A. S. B., N. S., XIV, 449-452.
 - -48. 1918. Suggestions regarding the mechanism of the "charriages." Journ. A. S. B., N. S., XIV, Proc., clxxxvclxxxvi (Abst.).
 - -49. 1919. The Pegmatites considered as an Index to the age of some of the unfossiliferous rocks in the Indian Peninsula. Journ. A. S. B., N. S., XV, Proc. exev (Abst.).
 - -50. 1919. The Succession of the tertiary marine faunas in the East Indies, based principally on a Study of the Siphonostomatous Gastropoda. Journ. A. S. B., N. S., XV, Proc., cc (Abst.).
 - -51. 1919. Note on the marine fossils collected by Mr. Pinfold in the Garo Hills. Journ. A. S. B., N. S., XV, Proc., cci (Abst.).

Vredenburg, E. W., and Dasgupta, H. C. 1854a 1918. On the discovery of Upper Palæozoic Fossils in the Krol beds of the Simla region. Journ. A. S. B., N. S., XIV, Proc., clxxxv (Abst.).

W

Wadia, D. N.

1863a-1. 1918. Stegodon Ganesa in the Middle Siwaliks of Jammu. Journ. A. S. B., N. S., XIV, Proc., clxxxvii (Abst.).

-2. 1919. Geology of India, for Students. 8°, 398 pp. London.

Wadia, D. N.—contd.

1863a—3. 1919. Some saussurite boulders from Kashmir:—a Study in saussuritization. *Journ. A. S. B.*, N. S., XV, *Proc.*, exevi (Abst.).

Walker, H. (2)

1869—2. 1916. The Visuni and Ekh Khera aerolites. Rec. G. S. I., XLVII, 273—279.

-3. 1919. Some recent falls of aerolites in India. Journ. A. S. B., N. S., XV, Proc., exevii (Abst.).

Ward, F. Kingdon.

1883—2. 1913. Geological Notes on the "Land of Deep Corrosions." Geol. Mag., Dec. 5, X, 148—153.

- —3. 1916. Glacial phenomena on the Yünnan-Tibet frontier. Geogr. Journ., XLVIII, 55—68.
- -4. 1916. Further Geological Notes on the "Land of Deep Corrosions." Geol. Mag., Dec. 6, III, 209-219.
- -5. 1919. On the possible prolongation of the Himalayan axis beyond the Dihang. Geogr. Journ., LIV, 231-241.

Waring, F. J.

1888a. . 1917. On the Physical Features of Adam's Bridge and the Currents across it, considered as affecting the proposed Construction of a Railway connecting India with Ceylon. *Proc. Inst. C. Eng.*, CCIII, 284—332.

Warth, F. J., and Maung Po San.

1891a. 1919. The Absorption of Lime by Soils [in Burma]. Mem. Dep. Agric. Ind., V, 157—172.

Warth, H.

1892—30. 1916. Chemical composition of the Red Marl of the Salt Range, Punjab. Rec. G. S. I., XLVII, 78.

Washington, H. S.

1893a . 1916. The Charnockite Series of Igneous Rocks [Analyses].

Amer. Journ. Sci., Ser. 4, XLI, 323—338.

Watson, H. E., see Smeeth, W. F.

Wayland, E. J.

1905—2. 1916. Equus zeylanica, Spol. Zeyl., X, 261—278; XI, 81—83.

-3. 1919. Outlines of the Stone Ages of Ceylon. Spol. Zeyl., XI, 85—125.

Willbourn, E. S.

1933a . 1917. The Pahang Volcanic Series. Geol. Mag., Dec. 6, IV, 447—462, 503—514.

Woodward, A. Smith.

1963—2. 1915. On the Skull of an extinct Mammal related to Æluropus from a Cave in the Ruby Mines at Mogok, Burma. *Proc. Zool. Soc.*, 1915, 425—428.

Workman, Mrs. F. Bullock, and W. Hunter Workman.

1966—6. 1917. Two summers in the Ice-wilds of Eastern Karakoram, the exploration of nineteen hundred miles of mountain and glacier. 8°, London.

Y

Younghusband, Sir F. E.

1986-9. 1917. Geographical Work in India. Geogr. Journ., XLIX, 401-418.

\mathbf{Z}

Zuber, R.

1988a. 1915. Beiträge zur Geologie des Punjab (Ostindien). Jahrb. k.—k. geol. Reichsanst., LXIV. 327.—356.

BIBLIOGRAPHY

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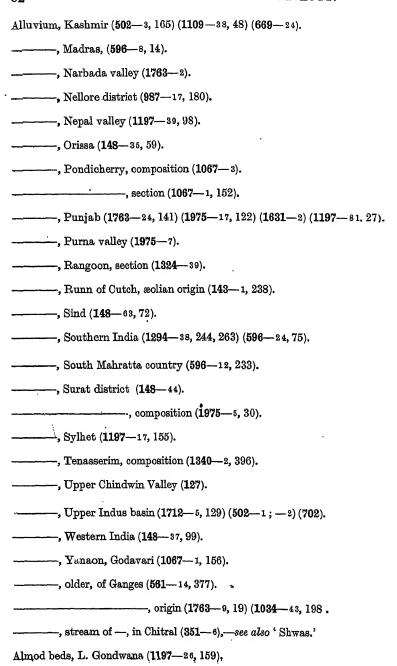
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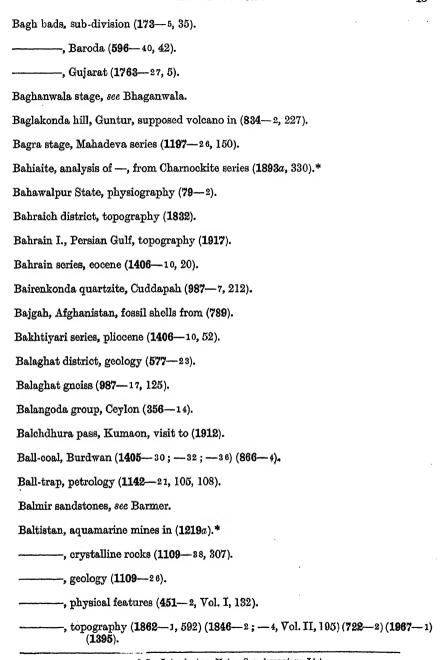
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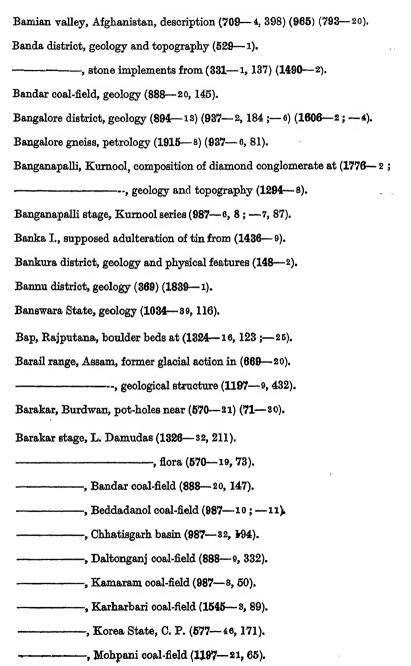
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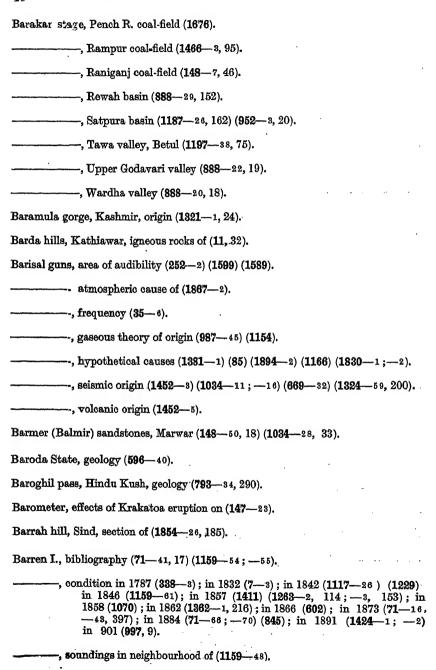
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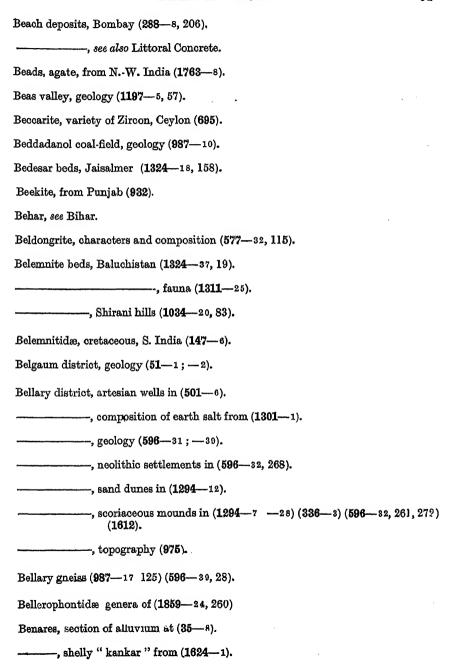
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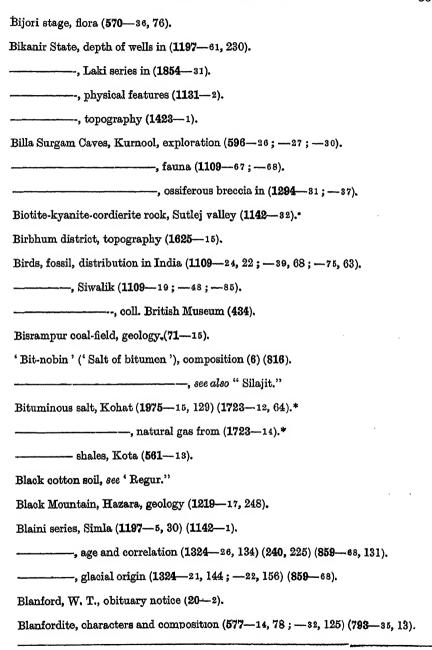
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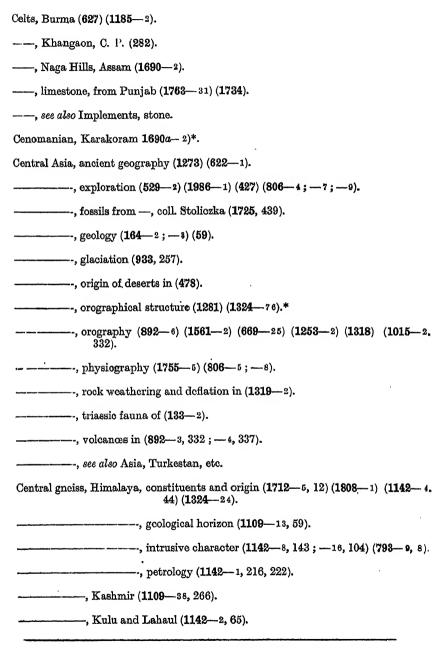
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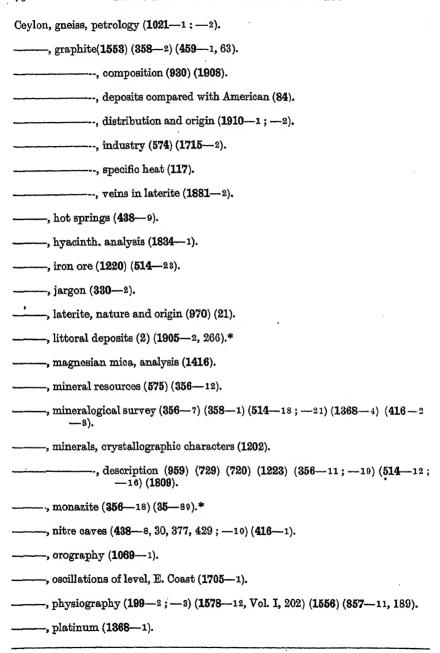
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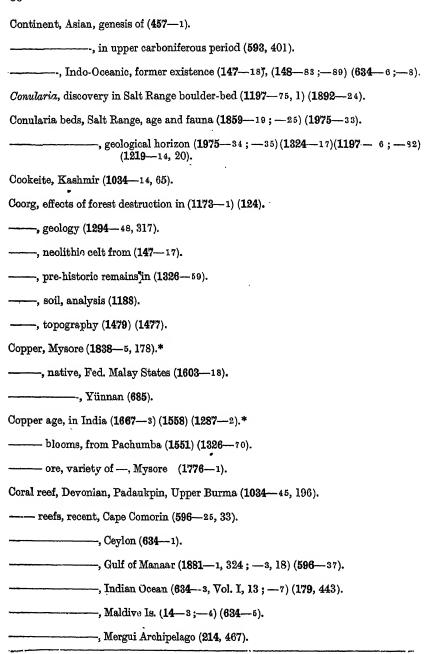
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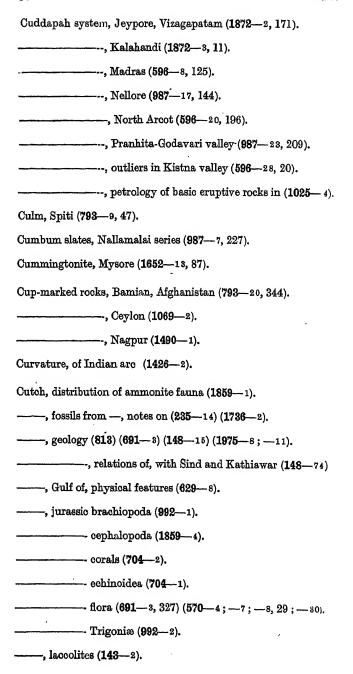
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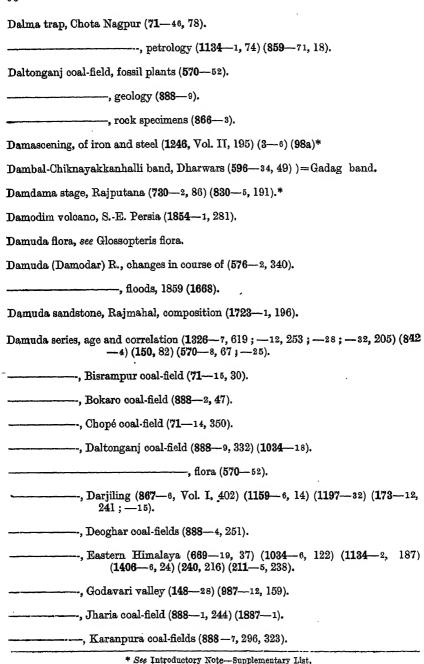
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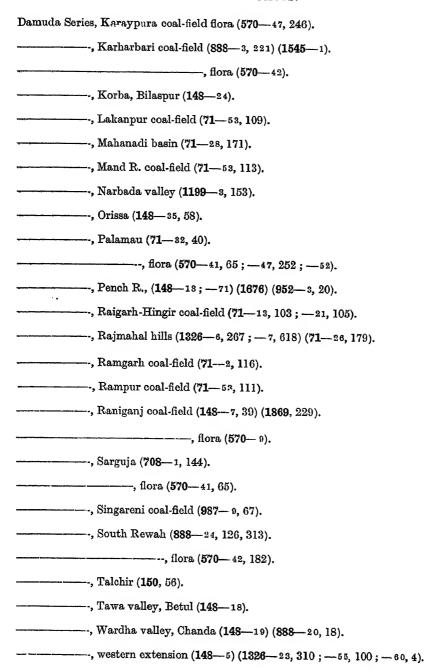


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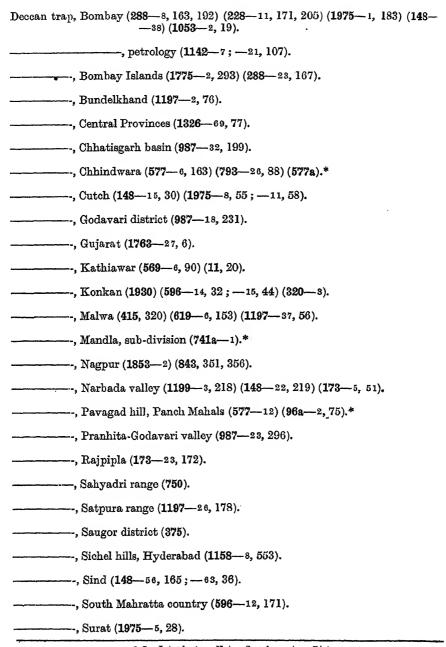
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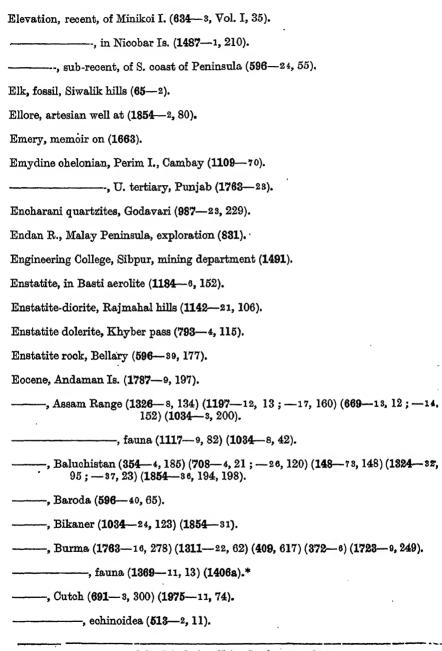
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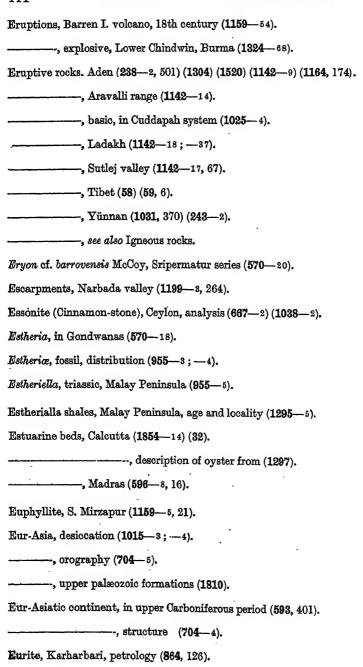


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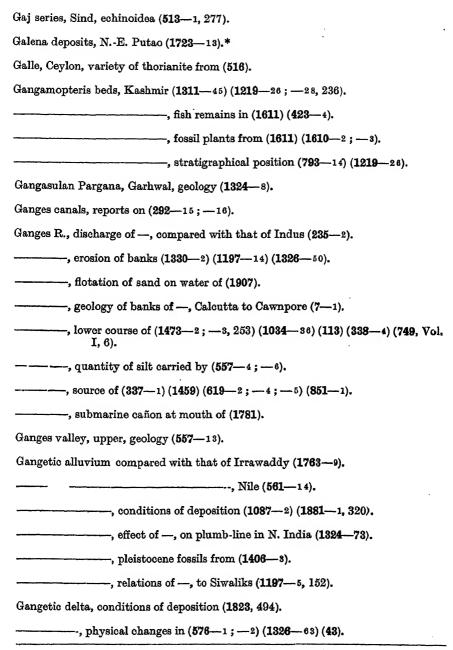
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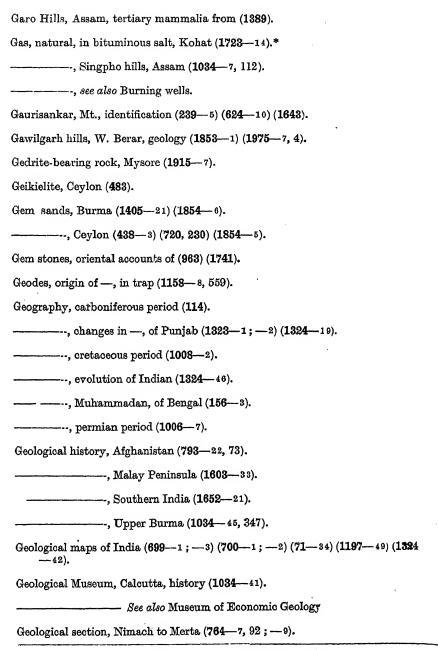
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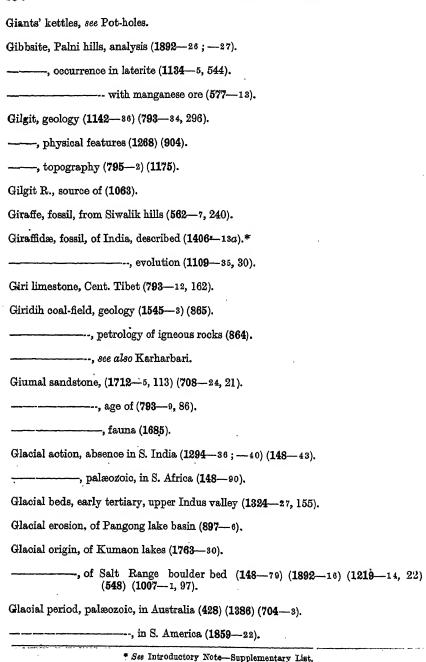
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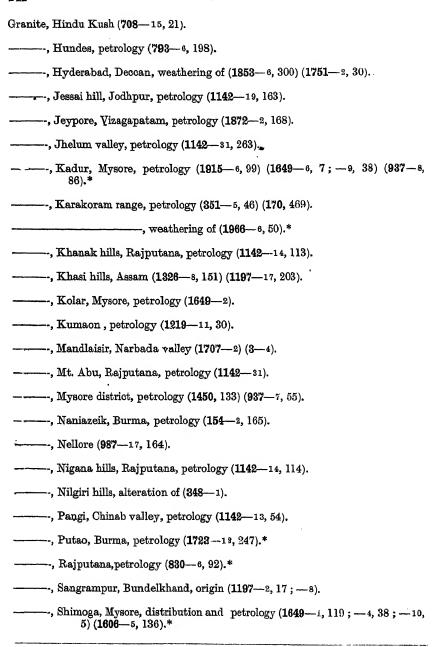
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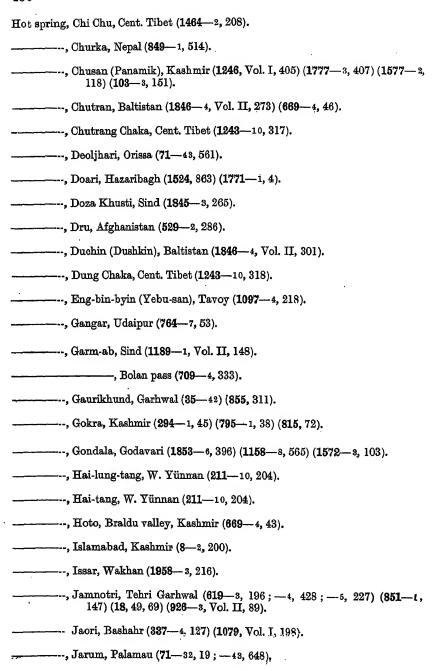
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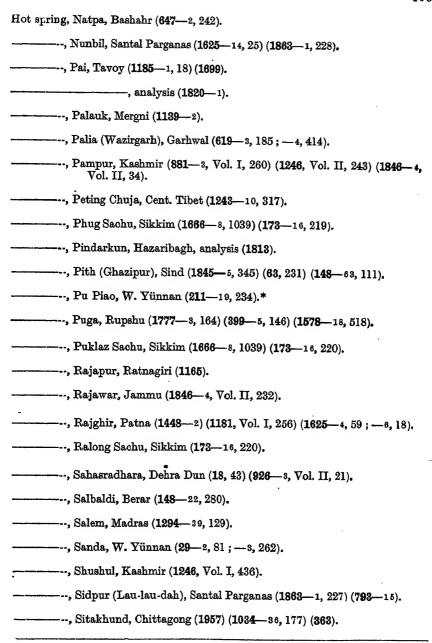
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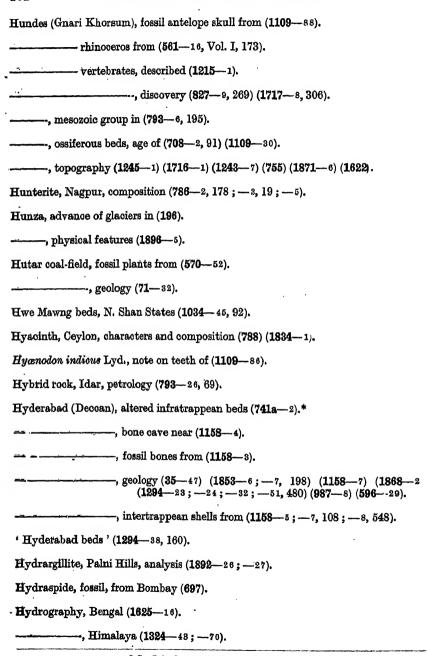
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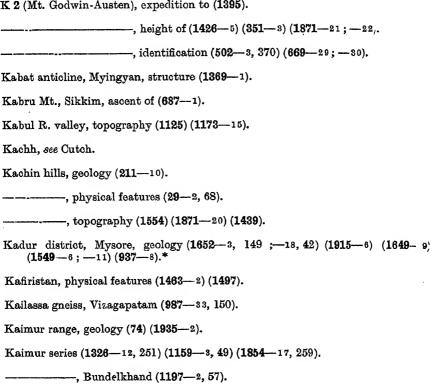
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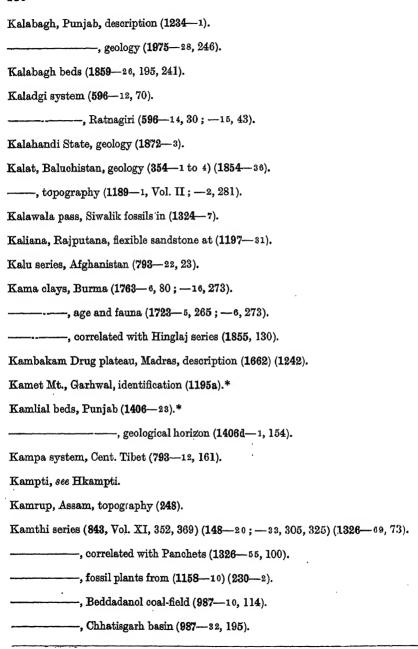
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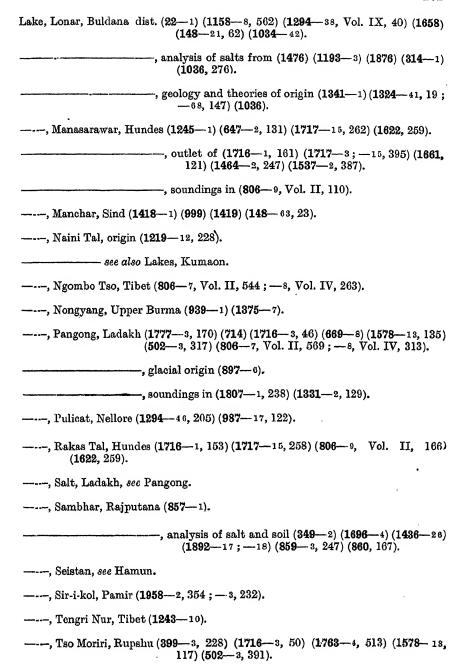
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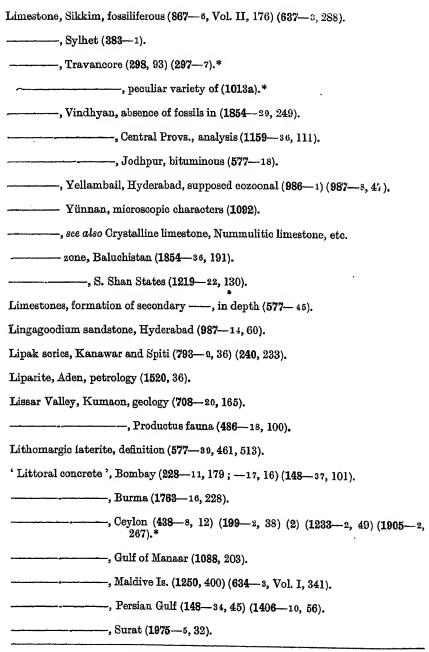
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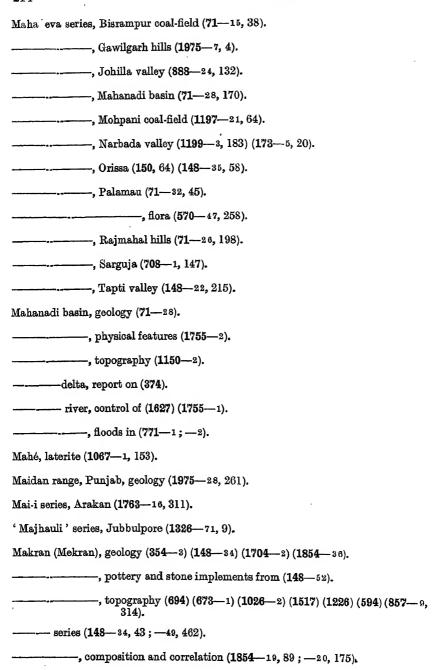
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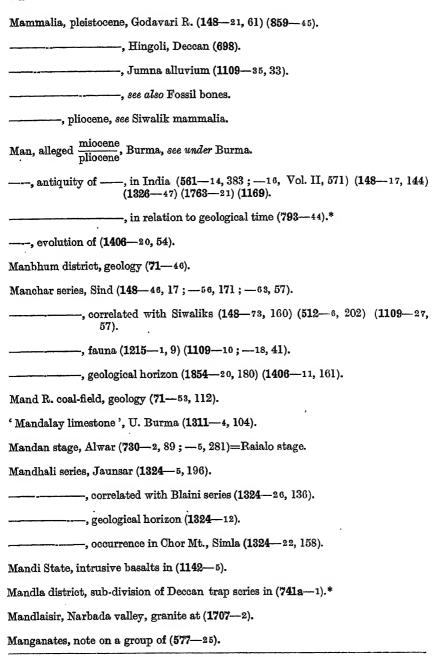
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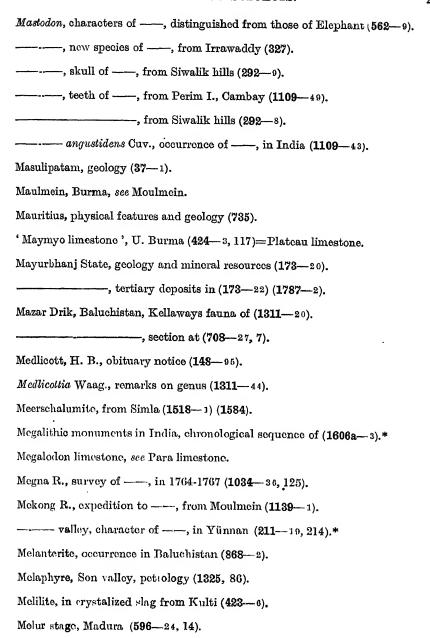


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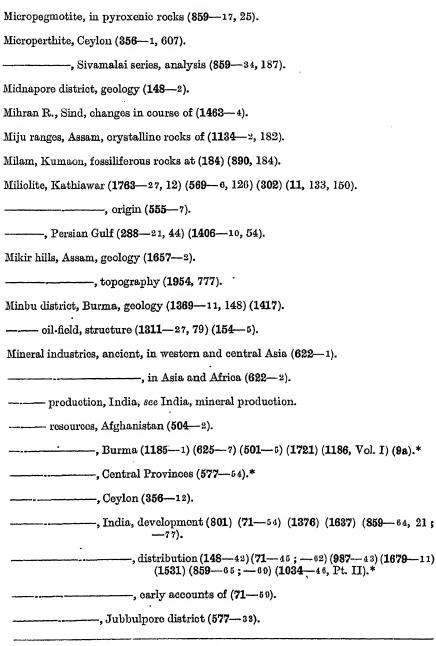
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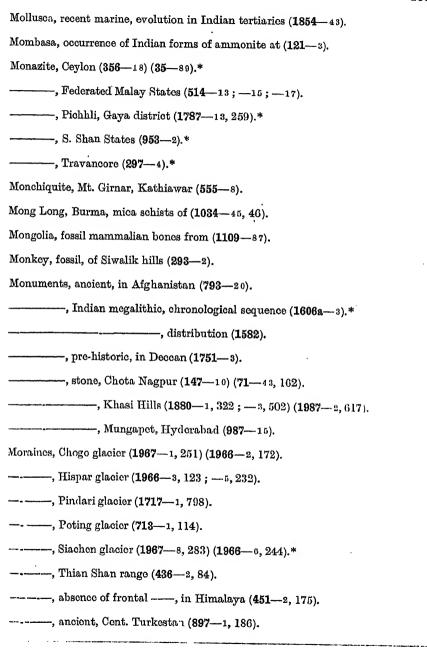
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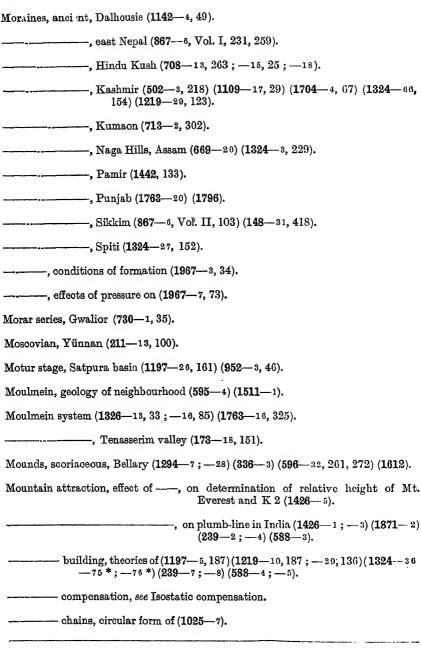
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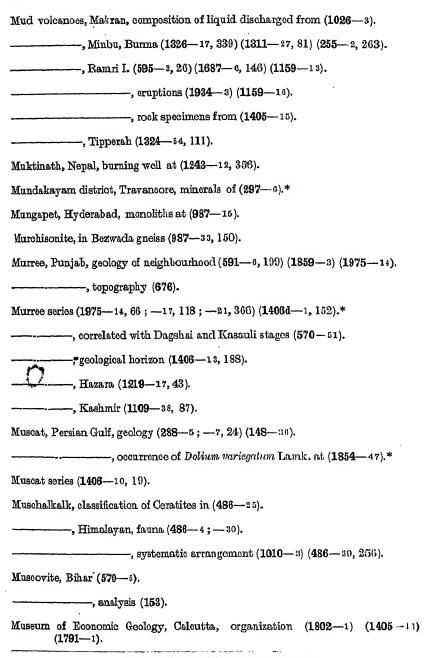


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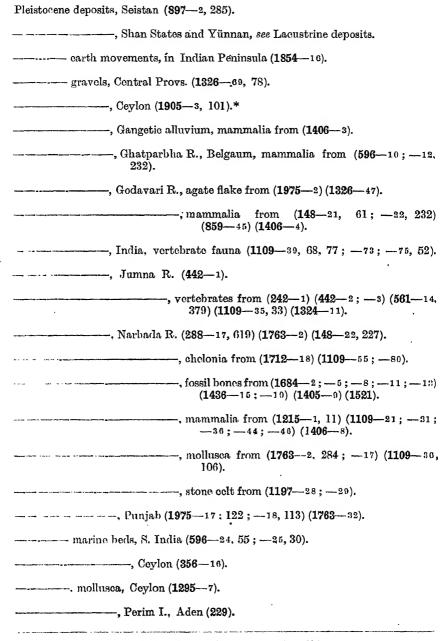
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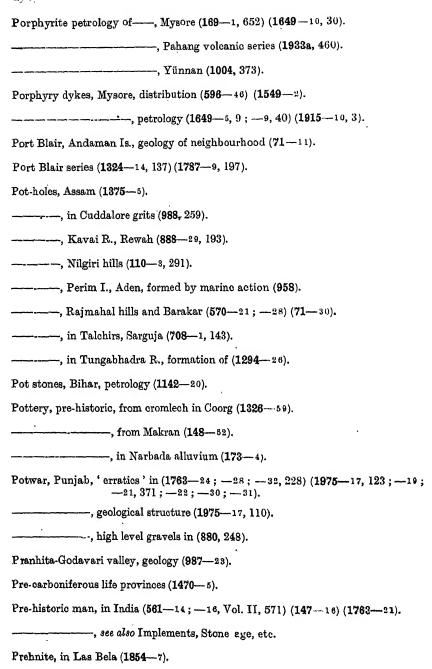
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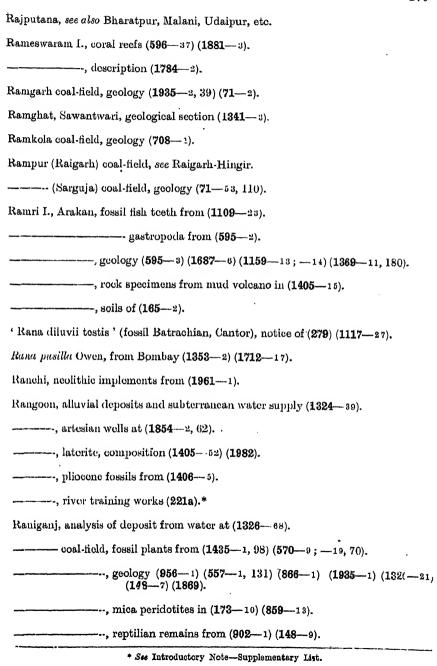
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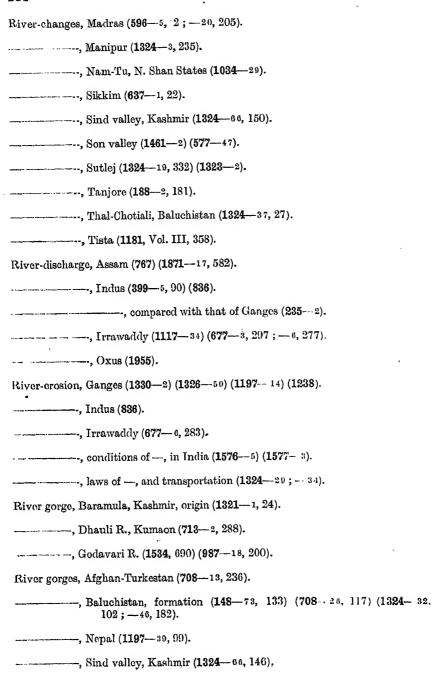
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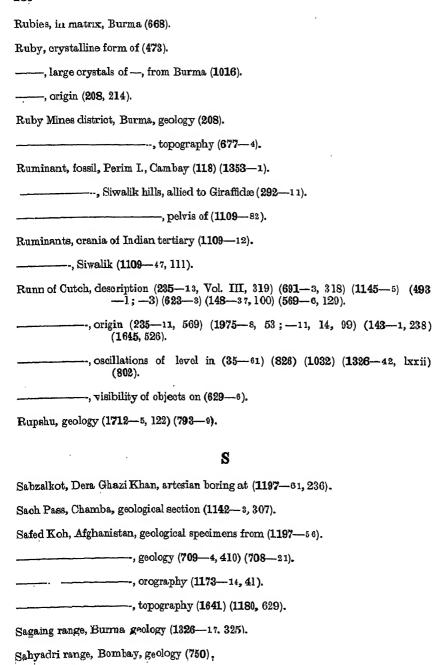
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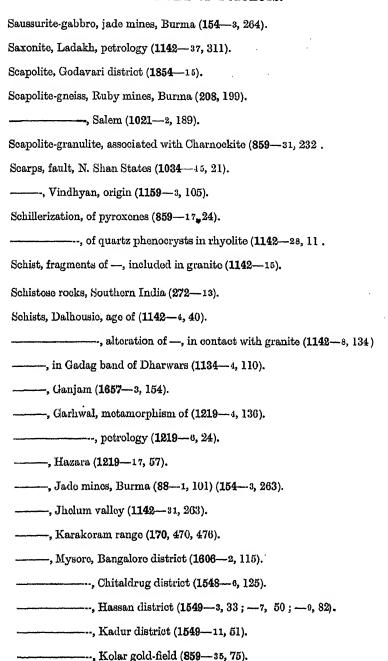
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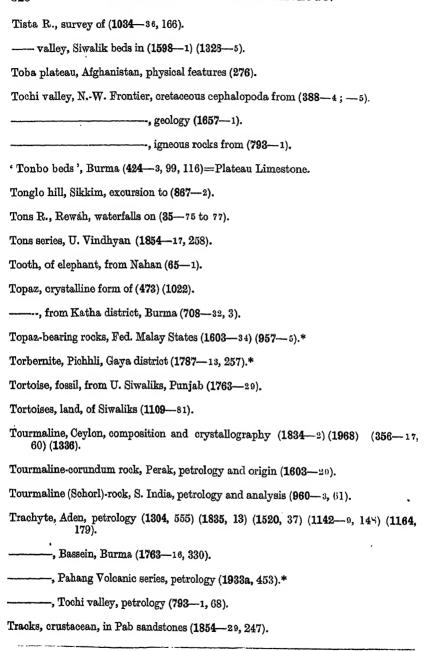
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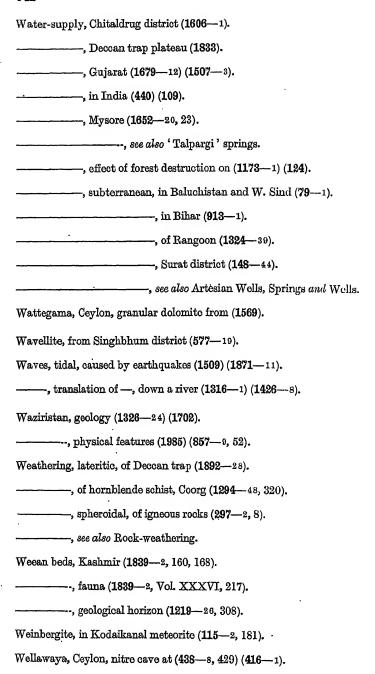
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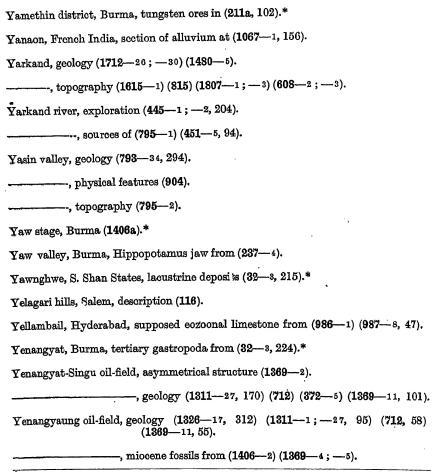
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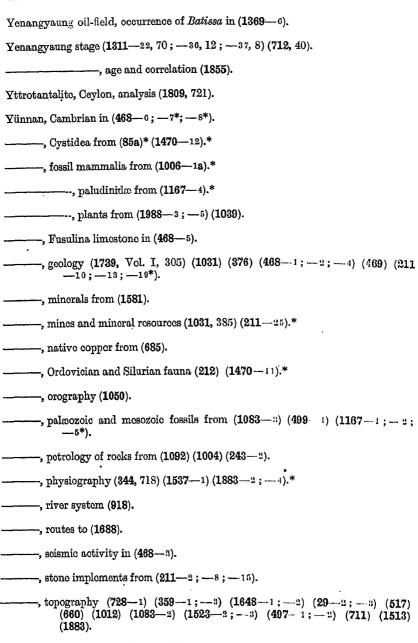
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